(No Model.)

H. PENNIE.

DUST AND SEWER TRAP.

No. 268,821. Patented Dec. 12, 1882.

Fig. 1.

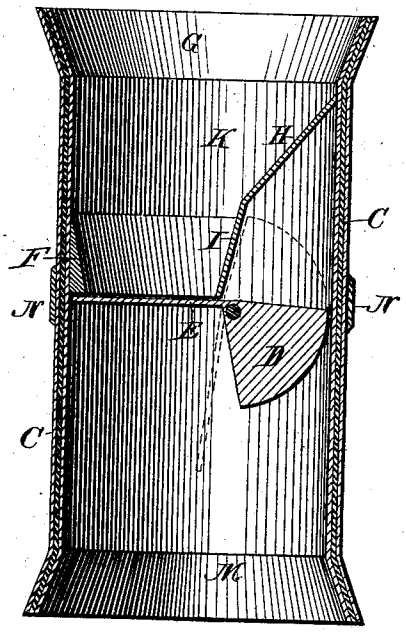
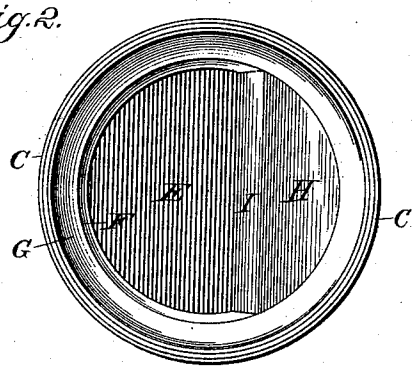


Fig. 2.



Witnesses.
Morgt D. Wilkes
John E. Barnes
Thomas Greenwood

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UNITED STATES PATENT OFFICE.

HENRY PENNIE, OF BROOKLYN, NEW YORK.

DUST AND SEWER TRAP.

SPECIFICATION forming part of Letters Patent No. 268,821, dated December 12, 1882.

Application filed March 10, 1882. (No model.)

To all whom it may concern:

Be it known that I, HENRY PENNIE, of Brooklyn, in the county of Kings and State of New York, have invented a new and useful Improvement in Dust and Sewer Traps; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which similar letters indicate similar parts.

My invention is principally designed to provide a device, in a simple and compact form and at a less cost than apparatus employed for analogous uses, to prevent the return-flow of obnoxious gases, dust, and vapors from receptacles into which refuse materials are precipitated from a discharge-chute. It is intended especially to be employed, both in the form represented in the drawings and in the modified forms hereinafter specified, as a provision of the dust-chutes used in French flats for conducting ashes, dust, &c., from the various floors to a bin prepared for their reception in the cellar. Its application to analogous uses will, however, be obvious from its general construction and arrangement. Among such uses may be mentioned leaders discharging into sewers, drop-pipes from dry privies, offal and refuse receptacles in slaughter-houses, fish-markets, and factories, or generally wherever it is desirable to prevent the back-flow of dust or gases from the conducting-chute or the receptacle into the upper compartment. It may also be advantageously constructed in a portable form and provided with an outer flange fitting over the top of an ordinary ash-barrel or garbage-barrel, in which case handles are provided for removing it when the barrel is filled.

Referring to the drawings, Figure 1 represents a central vertical section of any device, showing the operation of the valve. Fig. 2 is a perspective plan view of the same.

C represents the external surface, and K the internal surface, of the conducting-chute, which may be of any other contour in vertical or cross section than that shown. In most cases, however, the chute will be either rectangular or circular in cross-section. The material of construction will be cast-iron, sheet metal, earthenware, wood, or other suitable material. The chute may be flanged for the reception of an entering-pipe. Such flange is represented by the letter G. The lower end may be flanged in like manner for the reception of a discharge-pipe, as at M, suitable space being left in each case for soldering or cementing. When the sections are made of metal or earthenware, or the ends may be so shaped, if made of wood or other material incapable of being united by soldering, as will permit the formation of a tight joint, according to other well-known means. The valve E, if made of metal, is preferably cast in one piece, bored at L for the reception of an axle. The axle is situated at a distance upon the diameter of the valve about one-third of the length of such diameter and on the side of the heavy end D. The preponderance of weight on the side D secures an immediate closing of the valve after the passage of the refuse material. If the valve be made of wood, the side D may be weighted.

H I represent a hood or shield designed to protect the valve at L from clogging. It is inclined upon its upper surface, to present as little resistance as possible to the descent of projected materials. The inclination may be greater than that represented, the particular use to which the device is put determining in each case the angle of inclination. The angular flange F furnishes a bearing for the valve E when closed. The flange is beveled, as shown, so that the descending material will not rest upon it. The dotted lines show approximately the position of the valve when open. The full lines show it closed.

The mode of operation of the device is sufficiently obvious from the detailed description given.

The device is intended to be produced as an article of manufacture and sale, ready to be jointed or inserted in a dust or sewer pipe, or other conduit, or to be used independently thereof, in the manner hereinbefore specified.

I do not restrict my invention to the exact details of form shown and described, but claim such fair equivalents of the elements of combination set forth in the specific claims hereunto annexed as fairly fall within the invention.

What I claim, and desire to secure by Letters Patent, is—

1. The combination of the conduit C, the valve E D, constructed substantially as described, the flange F, and the shield or hood

H I, extending over the valve-joint, substantially as and for the purposes set forth.

2. The combination of the conduit C, the valve E D, constructed substantially as described, the beveled bearing-flange F, and the hood or shield H I, provided with a beveled or inclined upper surface and extending over the valve-joint, substantially as and for the purposes set forth.

3. The combination of the conduit C, flanged at both ends, as shown, the valve E D, the beveled bearing-flange F, and the hood or shield H I, provided with a beveled or inclined upper surface, substantially as and for the purposes set forth.

4. A trap consisting of the pipe or conduit section C, provided with flanged ends, beveled flange F, and inclined hood or shield H I, cast in a single piece, and the valve D E, cast in a single piece, substantially as described, the pipe-section and valve being united by the valve rod or axle running through the strengthening-band N, substantially as and for the purposes set forth.

In witness whereof I have hereunto set my hand, this 3d day of March, 1882, in the presence of two subscribing witnesses.

HENRY PENNIE.

Witnesses:
WILLIAM A. SWEETSER,
EDWARD F. RILEY.